

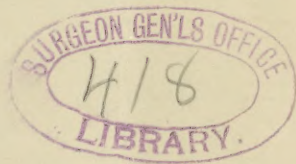
Elliot (G. T.)

BASSORIN PASTE:
A NEW BASE FOR
DERMATOLOGICAL PREPARATIONS.

BY
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Attending Dermatologist to Demilt Dispensary and the New York Infant
Asylum; Assistant Visiting Physician to the New York
Skin and Cancer Hospital.

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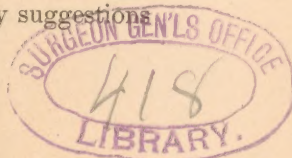
DERMATOLOGICAL PREPARATIONS.

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GEORGE T. ELLIOT, M.D.,

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SOMEWHAT over two months ago Mr. Lascar, the pharmacist of the Demilt Dispensary, called my attention to a preparation which he had made in the course of investigations undertaken with a view of finding a substitute for the gelatin base recommended and advocated by Unna and others, one certainly of great value and use, but yet open to more or less well-grounded objections, owing to the difficulty of obtaining a good article, at least here—the waste of time required in its application, the necessity of heating the mass every time it is used, the many visits entailed on the patient by the fact that it has to be applied by the physician, etc. Mr. Lascar was of the opinion that all such objections were fully met by the base which he showed me, and he requested me to try it in such diseases as I deemed appropriate, stating that he would gladly, after the trials, make whatever changes I considered necessary, and follow any suggestions



which I thought advisable in the preparation of the mass, in order to make it answer all requirements. The first sample furnished did not, however, fulfil the expectations entertained. I found it to be of too fluid consistence, it would not dry completely and form a suitable and flexible coat on the skin, and it did not adhere to the surface upon which it was spread. On the contrary, it could be rubbed off with ease. At my suggestion, therefore, the proportions of the various ingredients were changed by Mr. Lascar, and in order to make it adhere better, a certain percentage of dextrin was added.

The exact formula of this base, and the precise proportions of each ingredient entering into its composition, I will not give here, but will leave that part of the subject to Mr. Lascar, who will unquestionably soon make it public in the columns of one of the pharmaceutical journals. I may, however, say that the prime and important constituent of the base is bassorin, a substance which is defined in Dr. Foster's Medical Dictionary as "belonging to the class of vegetable mucilages derived from Bassora gum tragacanth and other sorts of gums; tasteless, odorless, and almost colorless; insoluble in cold water and swelling up into a viscous mass when treated with hot water. On being heated with aqueous solutions of alkalies it is converted into a gum soluble in water, and by treating with sulphuric acid it is transformed into a non-fermentible sugar." With this substance, bassorin, then, the remaining ingredients of the base—water, glycerin, and dextrin—are mixed in the proper proportions, and the compound to which the name bassorin paste can be given is thus obtained. When composed alone of the substances mentioned, bassorin paste is of the consistency of a jelly, tawny in color, resembling somewhat vaselin. It has no particular odor, is absolutely neutral in reaction, does not decompose even when kept a length of time: a sample in my possession has been kept six weeks and is the same as though prepared yesterday. If kept in damp places mould may, of course, develop on the exposed surface of the paste, but yet the paste itself does not seem to undergo change. Owing to the property it possesses of drying when exposed to the air, the bassorin paste should be kept in well-closed jars, preferably of glass, but even when it has hardened, rubbing it up again with a little water makes it as good as at first. The base does not come off when once dry on the skin, and thus soiling of the linen or bedclothes is avoided. Should it be desired it can at any time be easily removed by washing with a little water, a damp sponge, or absorbent cotton.

Almost any drug may at will be incorporated with the bassorin base. If the one used be soluble in the water contained in the paste, the color of the latter is unchanged, but if insoluble, then the color will vary according to that of the substance added to it. Those drugs

which exist only as fluids cannot be mixed, however, with the base, and neither can alcoholic solutions; but fats may be, yet to a limited extent. The former are excluded for the reason that they render the base too liquid, and the alcohols cause it to become brittle and hard. The proportion of the fats must be small, for the reason that if large, they would impair the property the paste has of drying and adhering to the skin. All substances, however, which exist in a solid form are easily incorporated with it in proportions as large as are ever used or found necessary. For instance, zinc oxide may be mixed with the base to the extent of thirty or more per cent; carbonate of magnesia, ten or more; chrysarobin, fifteen or more; salicylic acid, salicylate of soda, iodoform, resorcin, boric acid, borate of soda, sulphur, etc., etc., each and all incorporate perfectly with the bassorin paste and without changing its nature or its properties. The percentages of the tars do not, however, go as high on account of their oily nature, but yet I have found that *pix liquida*, *oleum rusci*, and also *ichthyol* could be added successfully to the amount of fifteen per cent. When the tars and oily drugs are used, it is advisable to incorporate with the base ten or more per cent of zinc oxide also, or of some neutral powder, as chalk, wood pulp, etc., so as to counteract any possible impairment of the base's characteristics. Combinations of two or more drugs can be added to the mass, as well as any single one, and in fact its use as a base is practically the same as that of an ointment. Salicylic acid and oxide of zinc, the former and chrysarobin, or *hydrargyrum ammoniatum* and *aristol*, or zinc oxide, magnesia carbonate, and *ichthyol*, etc., etc., have been respectively combined by me with the bassorin base without observing any differences between the resulting compound and the same drugs mixed together with some ointment or other as an excipient.

The action of the substances incorporated with the bassorin base has appeared to me to be eminently satisfactory, as good as when they are used in the form of an ointment or in collodion or *liq. gutta percha* or gelatin. Whether it has been resorcin in a *seborrhœic eczema*, or chrysarobin in *psoriasis*, or *ichthyol* for a *parasitic eczema*, or *pix liquida* for a chronic squamous one, or whether the process on the skin has been acute or chronic, yet the results obtained have been just as good as when any one of these remedies has been used in some other excipient. For the most part, I would say that the effect has been better, especially as regards ointments or lotions, for the reason that the remedy remains in constant contact with the diseased skin when mixed with the bassorin paste, and this base being absolutely without any irritating properties, it is of much wider applicability and service than the collodions or traumaticins. As far as I may judge

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from the effect of the paste upon disease, it does not prevent absorption by the skin of drugs incorporated with it, and it likewise takes up in certain degree any moisture which may be present upon the skin.

In its use there is the greatest simplicity. The drugs indicated by the disease being added to the base, the paste can be rubbed over the surface by means of the finger or a soft varnish-brush—a camel's-hair brush is too yielding and soft to be of service. The amount applied may be made as great or as small as desired, but I have found no advantage to result from using thick coatings. On the contrary, enough to cover the surface uniformly is all that is necessary; more may be painted on, but it then requires longer to dry and its outer layers are more liable to peel off. After the paste has been applied, exposure to the air for a few minutes—the time varying according to the thickness of the coating, but being usually about five minutes—is sufficient to have it dry thoroughly, and it then represents a flexible adherent covering for the skin, one which, moreover, sticks so effectually that it withstands brisk and forcible rubbing, or as a patient expressed it after having spent half a day trying to pick the paint off, “it sticks like paper on a wall.” The length of time that the paste will remain without scaling off or cracking will naturally depend upon the condition of the surface upon which it has been applied. I have seen an ichthyol or tar bassorin paste remain *in situ* and without change for four days, when the portion of skin which either one covered was neither moist nor exposed to very great friction from the movements of the body. When more or less moist exudation, however, is present and a feature of the disease being treated, the paste ought to be applied freshly every twelve hours at least, or if necessary even oftener—every three or four hours. On the whole, it may be said that once in twelve hours or in twenty-four hours is sufficiently often to renew the dressing, though, as already mentioned, one should be guided by the conditions existing on the surface treated. In situations such as the inguinal region, the anal furrow, the axillæ, etc., it is best to separate the parts painted with the bassorin paste by a thin layer of absorbent cotton or other protective, as the rubbing together of these surfaces would be apt to remove the dressing.

The usefulness of the paste is limited only by the degree of moisture or of exudation on that portion of the skin to which it is to be applied. When such conditions exist in great amount, it would be difficult to obtain complete adherence of the base, for the reason that water softens it and would prevent its drying. If only a slight or medium amount, however, of exudation be present, the use of the paste is not contra-indicated and the moisture may be overcome, es-

pecially if such hygroscopic substances as carbonate of magnesia, or starch, or kieselguhr are added to it in the proportion of ten to fifteen or more per cent. The base is also applicable in cases of vesicular or pustular eruptions if the lesions are still intact or if only comparatively few have ruptured—that is, if the amount of moisture is not so great that the consistency, the drying and adhering properties of the bassorin compound will be impaired. On surfaces exposed and liable to contact with water or other fluids, it is also evident that the bassorin cannot be always used, as the result would be its speedy removal. I have seen this occur on the hands of patients when they became wet from rain or from some other cause, but inasmuch as it does not rain all the time and avoidance of wetting is easy, such occurrences cannot be looked upon as prejudicial to the value of the paste.

Perhaps the most extended use of the bassorin base, however, will be in those inflammatory and other processes on the skin which are dry, squamous, and unaccompanied by much moist exudation, in some of the parasitic diseases, in those requiring protective action and when the constant effect of the remedy is desired. I have already tested it in quite a large number of such cases, among which may be mentioned several forms of eczema, acne, psoriasis, and syphilis, and always with the best results. My patients, especially in private practice, have extolled its praise in the highest terms, on account of the freedom from the disagreeable characteristics of ointments which it allows, and in consequence the treatment prescribed has been followed with greater care and less distaste. As instances, I would mention the following cases:

CASE I.—Acute papulo-vesicular eczema of the trunk and extremities. The patient was first seen December 13th, 1890. On the arms alone, R Acid. salicyl., gr. 15; zinc. oxid., gr. 50; bassorin paste, $\frac{3}{4}$ i. M. et S., was to be used, while for the rest of the body an ointment containing the same ingredients was ordered. December 14th the paste was still *in situ* on the arms, and when removed the eruption was seen to have subsided in great part. Itching and burning was said to have ceased after it had been rubbed on. Improvement had also occurred where the ointment had been used, but to a much less degree, the patient complaining of the itching and burning and greasiness. I directed him to use the bassorin paste over the entire surface once in twenty-four hours. On December 19th he was entirely free from the eruption.

CASE II.—Eczema of the fingers, papulo-vesicular and squamous in character and of long duration. Patient had been continuously for over a year under the care of several physicians besides myself. Salves, lotions, and gelatins, as well as internal treatment, had been used, but the results were far from satisfactory. When I saw him. on

November 15th, the eruption was markedly present on the first three fingers of each hand and the thumbs, squamous in character, with small areas of papules and vesicles and points of weeping here and there. He was given $\mathcal{R}$ Picis liquidæ, $\bar{3}$ i.; zinc oxide, gr. 40; bassorin paste, $\bar{3}$ i. M. S. Apply once daily. The improvement was immediate and he is now (January 4th, 1891) free from the disease for the first time since its inception.

CASE III.—Eczema seborrhoicum of the inguinal regions. Patient was seen December 7th, 1890, one week after he had noticed the eruption. It consisted of large, circumscribed, slightly reddened patches, covered with moderately thick yellowish and brownish fatty crusts. A marked condition of pityriasis was present on the scalp. For the patches he was given $\mathcal{R}$ Resorcin, gr. 25; bassorin paste, $\bar{3}$ i. M. S. Apply once in twenty-four hours. The surface was to be washed every day with soap and water before the paste was applied. On December 14th only slight traces of the disease remained, and a week later it had entirely disappeared.

The same speedy and effectual result was obtained also on a baby presenting the same manifestations of seborrhoic eczema in both axillæ and inguinal regions, a very short time being required for the removal of the eruptions.

CASE IV.—Psoriasis. Patient had been treated with unguenta, chrysarobin collodion, tar tinctures, plasters, without satisfactory results. I gave him $\mathcal{R}$ Olei rusci, 3 iss.; zinc. oxid., 3 i.; bassorin paste, $\bar{3}$ i. M. Sig. He found it was only necessary to apply the paste once in forty-eight hours. It remained adherent for that length of time without cracking or scaling. Beginning the treatment December 2d, he has in four weeks obtained more improvement in the rebellious, chronic, thickened patches—on the backs of the hands, legs, and thighs—than he had from all the other forms of treatment which had been made use of for four months previous.

Besides these cases, a number of others were treated in private practice with the bassorin paste, and with most satisfactory results. Seborrhoic eczema in various situations, irritation and reflex eczemas, acne, psoriasis, etc., were most satisfactorily influenced by the treatment, and besides, the same good effects were obtained in hospital service. Eczema, psoriasis, syphilis, etc., were treated by means of the base, both in the wards of the New York Skin and Cancer Hospital and in the Out-door Department. In these also its application was found to be easy. It adhered so well to the skin that on some renewal of the paste was made only once in forty-eight or seventy-two hours, and a more efficacious dressing could not have been used.

CASE V.—Syphilis gummatosa cutanea. The lesions were situated on the forearms and consisted of cutaneous gummata and groups of

large resolving papules. Over a portion, the treatment followed before she came to the hospital had caused an outbreak of eczema, and weeping and formation of thin crusts had developed. On her admission she had had applied a dilute ungt. hydrargyrum (3 ij.: ʒ i. ungt. oxid. zinci), but it intensified the eczema after a few days and I ordered it to be discontinued, and on December 13th, 1890, prescribed R Ichthyol, gr. 10; pulv. zinc. oxid., gr. 50; bassorin base, ʒ i. M. At first there was a certain degree of smarting produced, but by the 21st the eczema had healed, the eruption was noted as fading marvellously. She was taking at the same time mixed treatment. To-day (January 3d, 1891) there is only slight diffuse thickening of the skin where the eruption had been. In the out-door clinic, a case of acute vesicular eczema of the palms was treated with wonderfully quick effect; also one of chronic erythematous eczema of the face, of acne, etc. The results in all were surprisingly good.

The bassorin paste has been used by me in the following combinations among many others:

R Acid. borici, 3 i.-3 ij.	R Hydrarg. ammoniat., gr. 20-50.
Oxid. zinci, 3 i.	Oxid. zinci, 3 i.
Bassorin paste, ʒ i.	Bassorin paste, ʒ i.
M. et S.	M. et S.
R Aristol, gr. 25-50.	R Resorcin, gr. 25-3 ij.
Bassorin paste, ʒ i.	Bassorin paste, ʒ i.
M. Sig.	M. et S.
R Chloral, gr. 30.	R Resorcin, gr. 20.
Camphor, gr. 40.	Sulph. lactis, gr. 40.
Zinc. oxid., 3 i.	Bassorin paste, ʒ i.
Bassorin paste, ʒ i.	
M. et S.	
R Acid. pyrogallici, gr. 25.	R Zinc. oxid.,
Acid. salicylici, gr. 10.	Magnesiæ carbonat., āā 3 i.
Bassorin paste, ʒ i.	Bassorin base, ʒ i.
M. et S.	M. S.
R Olei rusci, 3 i.-3 ij.	R Picis liquid, 3 ss.-3 ij.
Zinc. oxid., 3 i.-3 iss.	Oxid. zinci, gr. 50.
Bassorin paste, ʒ i.	Bassorin paste, ʒ i.
M. et S.	M. S.

The brief description of the bassorin compound given will, I think, sufficiently delineate its principal characteristics and its value and applicability in the treatment of cutaneous disease. In conclusion, I would summarize these as well as the advantages it seems to me to possess over other excipients in more or less general use.

1. Bassorin paste is a perfectly neutral substance which of itself

produces no irritation whatever, and when used alone it acts simply as a protective to the skin. It does not become rancid or decompose or undergo change when kept for a length of time, unless it be exposed in an open vessel. When this is done it becomes dry and hard, but even then rubbing it up with a little water renders it again as serviceable as at first.

2. It is easy and simple in application, requiring only to be spread upon the skin with the finger or a brush. It dries in the space of a few minutes if so applied, adheres closely, does not rub off and soil the linen, but forms a flexible coat, which does not interfere with the movements of the body. When its removal is desired, the preparation can be washed off with a little water or a damp cloth or sponge. It remains *in situ* without change for a variable length of time, depending upon the condition of the surface on which it has been applied.

3. With the bassorin paste almost any drug can be incorporated; those which exist in the form of powders or in solid forms in any amount desired; the tars, ichthyol, and oily substances in smaller percentages, but sufficient for all practical purposes.

4. The action of drugs incorporated with it and their effect upon disease appears to be as good as when such are used in other excipients—or perhaps better in some cases.

5. It is of wide applicability, and of value in both acute and chronic forms of disease, its use being limited only by the degree of moisture on the surface being treated or to which it may be exposed.

These properties possessed by the bassorin paste render it, as may be seen, superior to ointments, for the reasons, among others, that it is difficult to keep the latter in constant contact with the diseased surface; that salves soil and stain the linen, and offer such other objectionable features as greasiness, risk of becoming rancid, etc., to say nothing of the discomfort entailed upon the patients using them. It is also of wider application than the collodions and traumaticins, owing to the irritation of the ether and chloroform contained in them, their contractile property, the limited extent of surface over which they can be applied, and the difficulty experienced in removing them when desired.

The bassorin paste would seem to be also superior to the gelatin preparations, in that these latter are more or less cumbersome in their application, having to be heated freshly whenever used, entailing a waste of time and also frequent and practically unnecessary visits by the patient. Drugs incorporated with the gelatins have also seemed to me not to act as favorably upon disease as when mixed with the bassorin base.

